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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/074,522

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Susanne H. Goodson

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06/16/2008

NATIONAL STARCH AND CHEMICAL COMPANY

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EXAMINER

SHEIKH, HUMERA N

ART UNIT

PAPER NUMBER

1618

NOTIFICATION DATE

DELIVERY MODE

06/16/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@nstarch.com

Office Action Summary	Application No. 10/074,522	Applicant(s) GOODSON ET AL.	
	Examiner Humera N. Sheikh	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

Receipt of the Request for Continued Examination (RCE) under 37 C.F.R. §1.114, the Amendment and Applicant's Arguments/Remarks, all filed 03/24/08 is acknowledged.

Claims 1, 2 and 4-10 are pending in this action. Claim 1 has been amended. Claims 3 and 11-21 have previously been cancelled. Claims 1, 2 and 4-10 are rejected.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 March 2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pardini (U.S. Patent No. 4,708,870).

The instant invention is drawn to a solid polymer film comprising a polymer comprising: 5 to 40 mole percent of protonated amine monomer units, wherein said protonation is formed by a fixed acid; and at least 60 mole percent of hydrophobic monomer units, wherein water solubility of the polymer film is triggered by a change in pH, salt or surfactant concentration or both.

Pardini ('870) teaches a method for imparting a non-fugitive antimicrobial activity to an article of manufacture, which comprises forming the articles of manufacture from an acrylonitrile composition which includes up to 10% of a protonated amine. The antimicrobial activity is inherent in the acrylonitrile composition (see Abstract).

Pardini teaches that non-fugitive antimicrobial activity is imparted to acrylic polymers, fibers or fabrics made thereof, by copolymerization of an acrylic protonated amine comonomer and/or by use of protonated amine end groups (col. 2, lines 1-63).

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The Examples at column 5 demonstrate various embodiments of the invention. Example 1 at Table II on column 5 demonstrates acrylonitrile (AN) and methacrylate (MA) monomers were copolymerized with various protonated amine-containing monomers. The example shows that the copolymerization of protonated amine containing monomers in acrylic polymers imparts antimicrobial activity.

With regard to mole percent claimed by Applicant, one of ordinary skill in the art would be able to make the conversion between mole percent and percent by weight. No unexpected results have been observed through Applicant's claimed mole percent since the prior art clearly teaches similar mole percents, as shown in the Examples.

The prior art teaches the same components, *i.e.*, protonated amine, for use in the same field of endeavor as the Applicants.

Given the teachings of Pardini discussed above, the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicant's arguments filed 03/24/08 have been fully considered but were not found persuasive.

Rejection of claims 1-10 under 35 U.S.C. §103(a) over Pardini (4,708,870):

Applicant argued, "Pardini teaches a method for imparting non-fugitive antimicrobial activity to an article of manufacturing by forming the articles of manufacture from an acrylonitrile composition that includes up to 10% of a protonated amine (Abstract). The

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antimicrobial activity is inherent in the acrylonitrile composition (Abstract). The maximum amount of protonate amine taught by Pardini is 3 mole %. Pardini specifically limits the amount of protonated amine to no more than 10%, or 3 mole %, in order to achieve the antimicrobial activity. Therefore, Pardini provides no motivation to one skilled in the art to seek compositions having from 5 to 40 mole percent of protonated amine monomer units."

Applicant's arguments have been considered, but were not found persuasive. Applicant's specification, page 4, line 20 indicates as working embodiments that from 2% is within the scope of the invention. Hence it cannot be seen how the prior art 3% would be so distinguishing from the limitations desired as to impart an unexpected result. Note that the spec. at page 4 suggests 5% as simply a preferred amount. Finally note that the % may be established by the use of a mixture of monomers.

Applicant argued, "Pardini makes absolutely no reference to controlled release, particularly with respect to film coatings useful for coating, for example, laundry detergent tablets. Pardini does not teach or suggest its polymer being triggerably soluble in water based upon changes in pH, salt or surfactant concentration or both. Rather, Pardini only suggests that its polymer is soluble in organic solvent (col. 3, lines 65-66)."

These arguments have been considered, but were not found persuasive. The characterization of controlled release in the scope of the generic claim, in the absence of specific rates of release and the recitation of specific formulations has not been given great weight, as distinguishing from the prior art generic teaching of the use of the same ingredients in amounts admitted to be effective. The burden would be shifted to Applicant to establish that the 3% of the prior art would not be capable of having the desired property, controlled release.

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Applicant argued, “The field of endeavor of Pardini is the provision of non-fugitive antimicrobial activity in the formation of synthetic fibers for use in clothing. In contrast, the field of endeavor of the present application is controlled release polymers; that is, polymers whose water solubility can be triggered by a change in pH, salt or surfactant concentration or both.”

These arguments have been considered, but were not deemed persuasive. The position of the Examiner is that the use of a sachet would not be so far from the teachings in the prior art’s suggestions of articles, cloths and yarns, since a reasonable interpretation of a sachet would be a bag made of cloth, absent a specific definition provided by Applicant in his specification. In the absence of such a recited definition it is reasonable to suggest that the fields of endeavor are clearly related.

The 103(a) obviousness rejection has been maintained.

Conclusion

--No claims are allowed at this time.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday during regular business hours.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley, can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Humera N. Sheikh/

Primary Examiner, Art Unit 1618

hns

June 05, 2008

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